S
614.71
H2m
1976
Oct

FEB 2'77

MONTANA DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES
MONTHLY ACTIVITIES REPORT OF THE AIR QUALITY BUREAU

October 1976

Montana State Library
3 0864 1006 5743 9
STATE DOCUMENTS

1. Highlights

Significant time spent on meteorological studies at Columbia Falls and Poplar River.

Fire Management reviewed on North Fork of Flathead.

Preparation of Hoerner Waldorf PER and continued review of renewal application.

Revisions were made on Eastern Montana sampling network.

Air Quality Maintenance Areas work plans developed.

Calibration of Anaconda SO_2 analyzers completed by outside contractor.

2. Ambient Air Quality Network

Standards Exceeded:

TSP*
Fire Station #1, Great Falls, 1 viol. Fed. sec. std.
High School, Col. Falls, 1 viol. Fed. sec. std.
High School, Col. Falls, 1 viol. MT 24-hr. std.
Courthouse, Missoula Co., 10 viol. Fed. sec. std.
Courthouse, Missoula Co., 3 viol. MT 24-hr std.

Non-Methane HC
BN, Colstrip, 1 viol. Fed. 3-hr. std.

SO_2
Post Office, Anaconda, 3 viol. MT 1-hr. std.
Mill Creek, Anaconda, 6 viol. MT 1-hr. std.
Hiway Jct., Anaconda, 20 viol. MT 1-hr. std.
Hiway Jct., Anaconda, 1 viol. MT 24-hr std.
Hiway Jct., Anaconda, 1 viol. Fed. 24-hr std.
Hiway Jct., Anaconda, 1 viol. Fed. 3-hr. std.
C-Hill, Anaconda, 3 viol. MT 1-hr. std.
C-Hill, Anaconda, 1 viol. MT 24-hr. std.
C-Hill, Anaconda, 1 viol. Fed. 3-hr. std.
Microwave, E. Helena, 1 viol. MT 1-hr. std.
Saddle Mountain, E. Helena, 2 viol. MT 2-hr. std.
3/8 mi. NE of Coop., Yellowstone Co., 2 viol. MT 24-hr. std.
3/8 mi. NE of Coop., Yellowstone Co., 2 viol. Fed. 24-hr. std.

Air Stagnation Advisories:

Air Stagnation Advisory in effect October 20 to 23. Air quality generally good throughout the month otherwise.

Laboratory Status:

Total determinations for the month - 243
Total samples for the month - 243

Developments:

Routine servicing and maintenance on sampling equipment in all areas.
Repairs made on several Anaconda area SO_2 analyzers.
Calibration of all SO_2 analyzers in Anaconda area.
Installation of high volume sampler for monitoring of Anaconda Company's new haul road and was begun.

3. Permits and Tax Credits

Construction Permits:

Application:
Washington Construction Co., Powell County, portable gravel crusher
Continental Oil Company, Billings, modifications to F.C.C. unit
Exxon Company, U.S.A., Billings, fluid coking unit
Approved:
Montana Pacific International, Roundup, oil-fired boiler
Hilde Construction Co., Inc., Fergus County, portable gravel crushing plant
Louisiana Pacific Corp., Missoula, bag houses, boiler modifications and dryer exhaust cyclone
Empire Sand & Gravel Co., Inc., Treasure Co., portable gravel crusher
Empire Sand & Gravel Co., Inc., Big Horn Co., asphalt batch plant

Tax Credits:

Anaconda Company's latest request still being processed (Electric furnace and roaster).

4. Variance Status

Current:

Anaconda Aluminum Co., Columbia Falls, F^- and particulate, expires 7/1/77
The Anaconda Co., Anaconda, particulate, expires 12/31/76
ASARCO, Inc., E. Helena, SO_2, expires June 30, 1977

New or Renewed:

The Anaconda Co., SO_2 variance renewal hearing delayed until November Board meeting
Anaconda's application for a variance from visibility rule for Anaconda reduction works has not been scheduled for hearing.

5. Enforcement Action

Citations:

ASARCO, E. Helena, smelter emissions in violation of Fed. 3-hr. and 24-hr stds.
ASARCO, E. Helena, smelter emissions in violation of Fed. 3-hr std.
ASARCO, E. Helena, smelter emissions in violation of Fed. 3-hr and 24-hr. std.
ASARCO, E. Helena, smelter emissions in violation of Fed. 24-hr. std.

ASARCO, E. Helena, smelter emissions in violation of Fed. 3-hr. std.
Plum Creek Lumber, Columbia Falls, tepee burner in violation of rule 16-2.14(1)-S14030
Del Conner Lumber, Darby, tepee burner in violation of rule 16-2.14(1)-S14030
Del Conner Lumber, Darby, open burning in violation of rule 16-2.14(1)-S1490

Notices of Violation:

None

Order for Corrective Action:

A proposed Order of Compliance for Gilman hot-mix plant has been sent to the Legal Division.

Court Actions:

Clayton Berg, open burning, Helena. Pre-trial motions must be submitted by November 5. Trial has been set for November 29.

6. Tepee Burner and Open Burning

Letter sent to all tepee burner operators requesting temperature charts and operation logs for 3 months.

Considerable slash burning accomplished. Forest Service slash burning for fall 50% complete.

Tepee Burner Status:

No. at Start	41
New Starts	0
Shutdowns	1
No. at End	40

Open Burning Permits:

Kalispell Office - 239	Sanders Co. - 41
Cascade Co. - 21	Yellowstone Co. - 32
Lake Co. - 62	Rest of State - 1301
Missoula Co. - 38	Total Permits - 868

7. Source Tests Performed

Agency Source Tests:

Corette plant, particulate full load and stratification tests, October 18 through October 22, 1976.

Non-Agency Source Tests:

Particulate emission tests of Holly Sugar Company's beet pulp dryers observed by Air Quality Bureau staff.

8. Field Investigations

Plum Creek Lumber, Columbia Falls, tepee burner, inspection
C & C Plywood, Kalispell, tepee burner, inspection
St. Regis Lumber, Libby, tepee burner, inspection
Stauffer Chemical, Butte, inspection
Louisiana Pacific, Columbia Falls, opacity observation
Rocky Mountain Lumber, Columbia Falls, opacity observation
Industrial Wood Products, Kalispell
Plum Creek Fiberboard, Columbia Falls, inspection
ASARCO, Troy, site inspection
W. R. Grace, Libby, all facilities, inspection
U. S. Plywood, Bonner, dryers, investigated request for compliance extension
Intermountain Lumber, Missoula, boiler, inspected
Del Conner Lumber, Darby, burner, inspected
Ward Lode Mine, Missoula, site inspection

9. Complaints

Tony Patrick Paint Shop, Butte, paint fumes, pollution control equipment being installed
Lewis & Clark County Road, dust, County commissioners will be contacted
Del Conner Lumber, Darby, open burning emissions, citation
Big Horn Calcium Co., Drummond, dust, under investigation
Butte, very poor air quality generally, episode procedures reviewed
Stauffer Chemical, Butte, smoke and fumes, citation
Forest Service, Wise River, slash burning causing visible and odor problems in Butte, episode procedures reviewed
Helena Sewage Treatment, Helena odor, under investigation
Levengoods Restaurant and Motel, Somers, open burning after hours, under investigation
Louisiana Pacific, Columbia Falls, emissions, no cause for action

10. Data Processing Services

Ambient Data Summary:

Monthly report of September air quality data attached.

Emissions Inventory Status:

No source updates were received or processed this month.

Prevention of Significant Deterioration:

Additional information sent to Northern Cheyenne about diffusion modeling done.

Modeling:

Continuation of a model for Great Western Sugar Company. The results indicate the proposed fuel blending will not cause ambient standards violations.

11. Environmental Impact Statements

Agency Impact Determinations:

Hoerner Waldorf, mill expansion, Preliminary Environmental Review, no EIS required.

Other Agency EIS's Reviewed:

None

12. Status of Studies, Contracts and Reports

Anaconda smelter plume study
Anaconda Aluminum meteorological study, still being set up
Poplar River area meteorological study, will begin Febuary 1977
Health Study Phase I, person contracted to work on this phase. Will start November 1 and be completed February 1, 1977
Health Study Phase II, Region VIII attempting to fund this through a BOA grant.
Area Source Emission Inventory, PEDCo is approximately 50% complete. Should be completed November 15.
Developing prototypical work plan for any AQMA, 2/3 complete.

13. Schools and Training

Visible emission training, October 5, 1976, 28 persons qualified
Symposium in Raleigh, North Carolina, on Atmospheric Turbulence, Diffusion and Air Quality put on by American Meteorological Society.

14. Public Hearings and Meetings

Public Hearings:

None

Meetings Attended:

Rockwell, air pollution studies, Butte
Stauffer Chemical, Butte
MHD, Anaconda Co., Butte sampling
EPA, AQB, Anaconda smelter plume study, Butte
Stauffer Chemical, analyzers, Butte
PEDCo, Helena
Fish and Game, Water Quality, EPA, Poplar River study, Helena

Montana Association of Planners, Billings
TAC Meeting, Billings
Planning Board, local health department, Missoula
MERDA, ambient air baseline sampling, Butte
Conoco, Helena
Arden Shenker, stipulation with Anaconda Co., Helena
Hoerner Waldorf permit renewal, Helena
USFS, Ward Lode Mine, Missoula

Intra-Staff Meetings

Staff meetings (2)
Colstrip, AQMA, Helena
Hoerner-Waldorf, Helena

15. Public Information Requests

General information - 5
Air Quality Rules - 18
Clean Air Act - 5

16. Fiscal Status

Grants Received:

None

Monthly Expenditures:

Program	Budget	Expenditures October	Expenditures Year to Date	Funds Remaining
0630	449,576	27,835	130,210	319,366
0631	74,400	--	6,588	67,812
0633	82,635	3,621	16,516	66,119

MONTANA DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES

MONTHLY SUMMARY OF AIR QUALITY DATA

September 1976

Pollutant: Misc. Continuous Data — Units: Parts Per Million

AQCR	Site Location	HIGH READING: Current Month	HIGH READING: Year-to-Date	HIGH READING: Running Year	ARITHMETIC AVER.: Year-to-Date	ARITHMETIC AVER.: No. of Cons. of Data	Comments
	Carbon Monoxide						
140	17th & N. 27th Billings	----------	----------	***	----------	----------	----------
	27th & Montana Billings	17.00	26.50	26.50	2.20	9	1 excr. Fed. 8-hr std.
	Hydrocarbons						
140	27th & Montana Billings	6.90	7.80	30.00	2.73	9	
143	BN Site Colstrip	1.80	3.50	3.50	1.60	9	
	Meth. Hydrocarbons						
143	BN Site Colstrip	1.60	2.00	3.80	1.59	9	
	Non-Meth. Hydrocarbons						
143	BN Site Colstrip	1.10	2.00	2.00	0.01	9	
	Nitric Oxide						
143	BN Site Colstrip	0.0	0.0	0.0	0.0	2	
	Nitrogen Dioxide						
143	BN Site Colstrip	---	0.11	0.11	0.034	8	**
	Oxides of Nitrogen						
143	BN Site Colstrip	0.0	0.0	0.0	0.0	2	

*** Data not available at time of report
** Instrument problems

Pollutant: Misc. Continuous Data — Units: Parts Per Million

AQCR	Site Location	HIGH READING: Current Month	HIGH READING: Year-to-Date	HIGH READING: Running Year	ARITHMETIC AVER.: Year-to-Date	ARITHMETIC AVER.: No. of Cons. of Data	Comments
	Ozone						
140	27th & Montana Billings	0.05	0.10	0.10	0.02	9	
143	BN Site Colstrip	----------	----------	***	----------	----------	----------
	Sulfur Dioxide						
140	27th & Montana Billings	0.06	0.15	0.15	0.008	9	
	Laurel Farm Billings	0.80	0.80	0.80	0.037	7	5 excr. MT 24-hr. std.
	Laurel Water Pit. Billings	0.36	0.50	0.50	0.014	4	1 excr. MT 24-hr std.
142	East Snack E. Helena	0.36	0.44	0.44	0.01	9	2 excr. MT 1-hr. std.
	Microwave E. Helena	0.37	1.08	1.08	0.013	9	3 excr. MT 1-hr std.
	Saddle Mountain E. Helena	0.22	0.58	1.68	0.006	9	
	C-Hill Anaconda	0.96	2.54	2.54	0.018	8	1 excr. Fed. 3-hr std.
	Hwy Jct. Anaconda	0.63	0.78	0.78	0.017	9	7 excr. MT 1-hr. std.
	Mill Creek Anaconda	0.63	0.79	0.79	0.014	9	3 excr. MT 1-hr. std.
	Post Office Anaconda	1.02	1.02	1.02	0.01	9	1 excr. Fed. 24-hr. std.
143	BN Site Colstrip	0.0	0.02	0.02	0.0	9	

Pollutant: Misc. Bubbler Data — Units: Parts Per Million

AQCR	Site Location	HIGH READING: Current Month	HIGH READING: Year-to-Date	HIGH READING: Running Year	ARITHMETIC AVER.: Year-to-Date	ARITHMETIC AVER.: No. of Cons. of Data	Comments
	Sulfur Dioxide						
140	Lockwood School Billings	0.21	0.21	0.21	0.029	9	1 excr. Fed. 24-hr std.
	3/8 mi. NE Coop Billings	0.18	0.27	0.27	0.035	8	4 excr. MT 24-hr. std.
143	Scobey Daniels Co.	0.0	0.0	0.0	0.0	8	
	Ft. Peck McCone Co.	0.0	0.0	0.0	0.0	9	
	Lame Deer Rosebud Co.	0.0	0.0	0.0	0.0	7	
	BN Site Colstrip	0.0	0.0	0.0	0.0	9	
	McRae Site Colstrip	0.0	0.0	0.0	0.0	9	
	Nitrogen Dioxide						
143	Scobey Daniels Co.	0.0	0.02	0.02	0.004	8	
	Ft. Peck McCone Co.	0.0	0.08	0.08	0.005	8	
	Lame Deer Rosebud Co.	0.0	0.01	0.01	0.003	7	
	BN Site Colstrip	*		***			
	McRae Site Colstrip	----------	----------	***	----------	----------	----------

*** Data not available at time of report

Pollutant: Total Suspended Particulate — Units: Micrograms per cubic meter

AQCR	Site Location	HIGH READING: Current Month	HIGH READING: Year-to-Date	HIGH READING: Running Year	GEOMETRIC AVER.: Year-to-Date	GEOMETRIC AVER.: No. of Cons. of Data	Comments
140	Morton Res. Big Horn Co.	162	208	255	60.1	9	1 excr. Fed. sec. 24-hr.
	Warren Ranch Big Horn Co.	98	146	146	26.7	9	
	Lockwood School Billings	133	141	141	44.0	9	
	KGHL Billings	68	106	106	31.4	9	
	City Hall Billings	95	200	200	63.9	9	
	Grand Ave. Sch. Billings	101	199	199	54.9	9	
	28th St. West Billings	58	5398	5398	154.1	5	
	Laurel Jr. High Laurel	79	108	108	32.1	9	
141	Hospital Roof Great Falls	67	124	124	35.9	9	
	Fire Station #1 Great Falls	116	185	185	70.2	9	
142	Silv.Bow Gen Hos. Butte	42	173	173	52.1	9	
	Greeley School Butte	108	285	368	90.8	9	
	Atkins Res. Butte	66	306	306	48.3	9	
	Richer Res. Butte	20	30	54	16.3	9	

MONTANA DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES

MONTHLY SUMMARY OF AIR QUALITY DATA

September 1976

Pollutant: Total Suspended Particulate — Units: Micrograms per cubic meter

AQCR	Site Location	HIGH READING: Current Month	HIGH READING: Year-to-Date	HIGH READING: Running Year	GEOMETRIC MEAN: Year-to-Date	GEOMETRIC MEAN: No. of Qtrs. of Data	Comments
142	Hiway Jct. Anaconda	44	110	110	36.8	9	
	McKinley Res. Granite Co.	82	147	147	21.8	9	
	Microwave E. Helena	46	84	84	22.0	9	
	212 Pacific St. E. Helena	98	171	231	67.4	9	
	Tierney Res. Silver Bow Co.	58	202	202	29.9	9	
143	Littlefield Miles City	18	87	87	21.0	8	
	Scobey Daniels Co.	49	98	98	25.2	8	
	Glendive Dawson Co.	59	130	130	32.5	9	
	Lindsay (107348) Dawson Co.	36	38	38	15.0	9	
	Lindsay (107312) Dawson Co.	32	60	60	15.6	9	
	Ft. Peck McCone Co.	53	166	166	22.2	9	
	Broadus Powder River Co.	36	49	49	17.6	9	
	Poplar Roosevelt Co.	59	173	173	24.2	9	
	Lame Deer Rosebud Co.	30	131	131	9.8	6	
	BN Site Colstrip	44	104	104	27.5	9	

Pollutant: Total Suspended Particulate — Units: Micrograms per cubic meter

AQCR	Site Location	HIGH READING: Current Month	HIGH READING: Year-to-Date	HIGH READING: Running Year	GEOMETRIC AVER.: Year-to-Date	GEOMETRIC AVER.: No. of Qtrs. of Data	Comments
143	McRae Site Colstrip	39	86	86	17.3	9	
144	High School Columbia Falls	294	294	294	77.9	9	2 exer. Fed. prim. std.
	Downard Res. Kalispell	143	234	234	92.5	9	
	Sverdrup Libby	80	125	125	48.5	9	
	Courthouse Missoula	168	386	386	76.3	9	
	J-B Field Missoula	95	176	176	36.2	9	
	Frenchtown Missoula	76	217	217	31.2	9	

Pollutant: Misc. Indicators — Units

AQCR	Site Location	HIGH READING: Current Month	HIGH READING: Year-to-Date	HIGH READING: Running Year	ARITHMETIC AVER.: Year-to-Date	ARITHMETIC AVER.: No. of Qtrs. of Data	Comments
	Dustfall - Tons/square mile						
141	Mountain State Cascade Co.	15.72	28.20	28.20	17.79	9	
	Fire Station #1 Cascade Co.	8.92	37.73	37.73	18.02	9	
	Sulfation Rate - milligrams SO3/100 sq. cm.						
140	3/4 mi. NE Loop Yellowstone Co.	3.33	4.57	4.57	2.254	8	
	E of Laurel Yellowstone Co.	1.38	3.62	3.62	1.29	9	
	Hi-Ball Trucking Yellowstone Co.	1.12	1.41	1.41	0.792	8	
141	Stock Car Track Cascade Co.	0.02	0.23	0.23	0.058	8	
	Phillips Ref E. Cascade Co.	0.02	0.40	0.40	0.137	8	
	Phillips Ref NW Cascade Co.	0.07	0.33	0.33	0.138	8	
142	Microwave Jefferson Co.	0.27	0.40	0.40	0.275	9	
	Hwy 48 Jct. Deer Lodge Co.	0.75	1.10	1.10	0.571	8	
	C-Hill Deer Lodge Co.	0.72	1.04	1.04	0.545	3	
143	BN Site Colstrip	0.0	0.06	0.06	0.033	6	
	McRae Site Colstrip	0.0	0.0	0.04	0.0	7	

Pollutant: Misc. Indicators — Units:

AQCR	Site Location	HIGH READING: Current Month	HIGH READING: Year-to-Date	HIGH READING: Running Year	ARITHMETIC AVER.: Year-to-Date	ARITHMETIC AVER.: No. of Qtrs. of Data	Comments
	Fluoride Papers - micrograms/sq. cm./30 days						
142	Mullenberg Powell Co.	----------		*---	----------		
	Lahmans Powell Co.	----------		*---	----------		
	N. Ac. Hiway Powell Co.	----------		*---	----------		
	Ramsay West Sil. Bow Co.	0.87	1.75	1.75	1.06	9	
	ESE Stauffer Sil. Bow Co.	2.82	7.87	7.87	3.85	9	
143	BN Site Colstrip	0.02	0.02	0.03		5	
	McRae Site Colstrip	0.01	0.01	0.01		5	
144	Oehlbom's MT box Flathead Co.	1.71	1.71	1.71	0.89	9	
	Teakettle #2 Flathead Co.	----------		***---	----------		
	Teakettle #10 Flathead Co.	----------		***---	----------		
	Teakettle #12 Flathead Co.	----------		***---	----------		
	Glacier Park #1 Glac. Nat. Park	0.23	0.58	0.58	0.32	8	
	Glacier Park #2 Glac. Nat. Park	0.26	0.58	0.58	0.36	8	

* Site inactive at present time

***Data not available at time of report

STATE PUBLISHING CO. 5-76

MONTANA DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES

MONTHLY SUMMARY OF AIR QUALITY DATA

September 1976

Pollutant: Misc. Indicators Units:

AQCR	Site Location	HIGH READING: Current Month	HIGH READING: Year-to-Date	HIGH READING: Running Year	ARITHMETIC AVER.: Year-to-Date	ARITHMETIC AVER.: No. of Mons. of Data	Comments
	Fluoride Plates	- micrograms/sq.	cm./30 days				
142	Durant Canyon	1.47	2.29	2.29	1.67	4	
	Deer Lodge Co						
	N. Ac. Hiway	----------	----------	*-	----------	----------	----------
	Powell Co.						
	NW on Hill	----------	----------	*-	----------	----------	----------
	Powell Co.						
	Ramsay West	0.98	2.17	2.17	1.31	6	
	Sil. Bow Co.						
	ESE Stauffer	3.25	10.92	10.92	4.95	6	
	Sil. Bow Co.						
143	BN Site	0.0	0.0	0.0	0.0	6	
	Colstrip						
	McRae Site	0.0	0.0	0.0	0.0	9	
	Colstrip						
144	Teakettle #1	----------	----------	***	----------	----------	----------
	Flathead Co.						
	Teakettle #6	----------	----------	***	----------	----------	----------
	Flathead Co.						
	Anaconda South	8.82	8.82	8.82	5.16	8	
	Flathead Co.						
	Glacier Park #1	0.21	0.72	0.72	0.42	8	
	Glac. Nat. Pk.						
	Glacier Park #3	0.27	0.81	0.81	0.38	9	
	Glac. Nat. Pk.						

Pollutant: Units:

AQCR	Site Location	HIGH READING: Current Month	HIGH READING: Year-to-Date	HIGH READING: Running Year	ARITHMETIC AVER.: Year-to-Date	ARITHMETIC AVER.: No. of Mons. of Data	Comments

* Site inactive at present time
***Data not available at time of report

Pollutant: Units:

AQCR	Site Location	HIGH READING: Current Month	HIGH READING: Year-to-Date	HIGH READING: Running Year	ARITHMETIC AVER.: Year-to-Date	ARITHMETIC AVER.: No. of Mons. of Data	Comments

Pollutant: Units:

AQCR	Site Location	HIGH READING: Current Month	HIGH READING: Year-to-Date	HIGH READING: Running Year	ARITHMETIC AVER.: Year-to-Date	ARITHMETIC AVER.: No. of Mons. of Data	Comments